

### Chi-square Practice (4 species in 3 zones)

You set up a study site and divide it into 3 zones: Riparian is Zone 1, Contact with the Riparian Zone is Zone 2, and Non-riparian is Zone 3. You walk through each zone and count all of following trees: Tamarisk, Willow, Oak, and Cottonwood. Here's the data:

The sample must be randomly drawn from the population.  
Data must be reported in raw frequencies (not percentages);  
Measured variables must be independent;  
Values/categories on independent and dependent variables must be mutually exclusive and exhaustive;  
Observed frequencies cannot be too small.

	Riparian	Middle	Non-Riparian
Tamarisk	4	6	15
Willow	10	14	1
Oak	14	5	3
Cottonwood	12	10	11

You decide that trees have habitat preferences.

Now you want to know if you have support from a statistical test, and that you want to be correct at least 95% of the time ( $\alpha=.05$ ).